STANDART Pyro 5413 H Super Aluminium Powder

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name : STANDART Pyro 5413 H Super Aluminium Powder
Material number : 047505E50

Substance No. : CAS-No. : 7429-90-5
Index-No. : 013-002-00-1
EINECS-No. : 231-072-3

1.2 Relevant identified uses of the substance or mixture and uses advised against

This information is not available.

1.3 Details of the supplier of the safety data sheet

Company : ECKART GmbH
Guentersthal 4
91235 Hartenstein
Telephone : +499152770
Telefax : +499152777008
E-mail address : msds.eckart@altana.com
Responsible/issuing person

1.4 Emergency telephone

NCEC:
(contract no.: ECKART29003-NCEC)
+44 1235 239671 (Middle East/Africa, call and response in your language)
+1 215 207 0061 (Americas, call and response in your language)
+65 3158 1074 (Asia-Pacific, call and response in your language)

SECTION 2: Hazards identification

GHS Classification

: Flammable solids, Category 1, H228

Information concerning particular hazards for human and environment:
Please refer to our website for further important safety instructions for handling aluminium powder:
http://www.eckart.net/fileadmin/eckart/Service/GDA_Alupulver_Safety_engl.pdf

GHS-Labeling

Symbol(s) :

Signal Word : Danger

Hazard Statements : H228: Flammable solid.

Precautionary Statements : **Prevention:**
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P240 Ground and bond container and receiving equipment.
P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing protection.
Response:
P370 + P378 In case of fire: Use for extinction: Special powder for metal fires.
P370 + P378 In case of fire: Use for extinction: Dry sand.

Hazardous ingredients which must be listed on the label

SECTION 3: Composition/information on ingredients

Substance No. : CAS-No. : 7429-90-5
Index-No. : 013-002-00-1
EINECS-No. : 231-072-3

Hazardous ingredients

Chemical name	CAS-No. EINECS-No.	Classification and labeling	Concentration[%]
aluminium	7429-90-5 231-072-3	Flam. Sol.;1;H228	90 - 100

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice : Take the victim into fresh air.
Move out of dangerous area.
Show this material safety data sheet to the doctor in attendance.
Do not leave the victim unattended.

If inhaled : Remove to fresh air.
If unconscious, place in recovery position and seek medical advice.
If symptoms persist, call a physician.

In case of skin contact : Wash off immediately with soap and plenty of water.
If on clothes, remove clothes.

In case of eye contact : Flush eyes with water as a precaution.
Remove contact lenses.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.

If swallowed : Keep respiratory tract clear.

Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.

4.2 Most important symptoms and effects, both acute and delayed

This information is not available.

4.3 Indication of any immediate medical attention and special treatment needed

This information is not available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media	:	Dry sand, Special powder against metal fire
Unsuitable extinguishing media	:	ABC powder, Carbon dioxide (CO_2), Water, Foam
		High volume water jet

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire fighting	:	Contact with water liberates extremely flammable gas (hydrogen).

5.3 Advice for firefighters

Special protective equipment for fire-fighters	:	Wear self-contained breathing apparatus for firefighting if necessary.
Further information	:	For safety reasons in case of fire, cans should be stored separately in closed containments. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use a water spray to cool fully closed containers.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Use personal protective equipment.
Evacuate personnel to safe areas.
Avoid dust formation.
Remove all sources of ignition.

6.2 Environmental precautions

General advice : The product should not be allowed to enter drains, water courses or the soil.
Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective authorities.

This information is not available.

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up : Use mechanical handling equipment.
Do not use a vacuum cleaner.
Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).
Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For personal protection see section 8.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : Avoid creating dust. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces.
Store away from heat.

For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Open drum carefully as content may be under pressure. Dispose of rinse water in accordance with local and national regulations.

Advice on protection against fire and explosion	:	Use explosion-proof equipment. During processing, dust may form explosive mixture in air. Take measures to prevent the build up of electrostatic charge. When transferring from one container to another apply earthing measures and use conductive hose material. Provide appropriate exhaust ventilation at places where dust is formed. Keep away from open flames, hot surfaces and sources of ignition.
Hygiene measures	:	Wash hands before breaks and at the end of workday.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers	:	Earthing of containers and apparatuses is essential. Reaction with water liberates extremely flammable gas (hydrogen) Use explosion-proof equipment. Store in original container. Keep containers tightly closed in a cool, well-ventilated place. Keep away from sources of ignition - No smoking. Keep container closed when not in use. No smoking. Keep container tightly closed in a dry and well-ventilated place. Electrical installations / working materials must comply with the technological safety standards.
Further information on storage conditions	:	Protect from humidity and water.
Advice on common storage	:	Do not store together with oxidizing and self-igniting products. Never allow product to get in contact with water during storage. Keep away from oxidizing agents, strongly alkaline and strongly acid materials in order to avoid exothermic reactions.

Other data : Keep in a dry place. No decomposition if stored and applied as directed.

7.3 Specific end use(s)

This information is not available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Germany:

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Update	Basis
aluminium	7429-90-5	AGW (Inhalable fraction)	10 mg/m3	2021-07-02	DE TRGS 900
Peak-limit category		2;(II)			
Further information		When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child			
aluminium	7429-90-5	AGW (Alveolate fraction)	1,25 mg/m3	2021-07-02	DE TRGS 900
Peak-limit category		2;(II)			
Further information		When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child			

United States of America (USA):

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Update	Basis
aluminium	7429-90-5	TWA (total dust)	50 Million particles per cubic foot	2012-07-01	
aluminium	7429-90-5	TWA (Respirable)	5 mg/m3	2013-10-08	
aluminium	7429-90-5	TWA (total dust)	15 mg/m3	2012-07-01	

aluminium	7429-90-5	TWA (total)	10 mg/m3	2013-10-08	
aluminium	7429-90-5	TWA (respirable fraction)	5 mg/m3	2012-07-01	
aluminium	7429-90-5	TWA (respirable fraction)	15 Million particles per cubic foot	2012-07-01	
aluminium	7429-90-5	PEL (Total dust)	10 mg/m3	2014-11-26	
aluminium	7429-90-5	PEL (respirable dust fraction)	5 mg/m3	2014-11-26	
aluminium	7429-90-5	TWA (Respirable particulate matter)	1 mg/m3	2008-01-01	
aluminium	7429-90-5	TWA	5 mg/m3	2005-09-01	
aluminium	7429-90-5	TWA (Total)	15 mg/m3	1989-01-19	
aluminium	7429-90-5	TWA (Respirable fraction)	5 mg/m3	1989-01-19	
aluminium	7429-90-5	TWA (total dust)	15 mg/m3	2011-07-01	
aluminium	7429-90-5	TWA (respirable fraction)	5 mg/m3	2011-07-01	
aluminium	7429-90-5	TWA (Total dust)	15 mg/m3	1989-01-19	
aluminium	7429-90-5	TWA (respirable dust fraction)	5 mg/m3	1989-01-19	
aluminium	7429-90-5	TWA (welding fumes)	5 mg/m3	2013-10-08	
aluminium	7429-90-5	TWA (pyro powders)	5 mg/m3	2013-10-08	
aluminium	7429-90-5	TWA (Respirable particulate matter)	1 mg/m3	2013-03-01	
aluminium	7429-90-5	TWA (Fumes)	5 mg/m3	1989-01-19	
aluminium	7429-90-5	PEL (Welding fumes)	5 mg/m3	2017-10-02	
aluminium	7429-90-5	PEL (Pyro powders)	5 mg/m3	2017-10-02	
aluminium	7429-90-5	TWA (powder)	5 mg/m3	1989-01-19	

8.2 Exposure controls

Personal protective equipment

Eye protection	:	Face-shield
	:	Tightly fitting safety goggles
Hand protection		
Material	:	Leather
Glove length	:	Long sleeve gloves
Remarks	:	Leather gloves The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other.
	:	The suitability for a specific workplace should be discussed with the producers of the protective gloves.
Skin and body protection	:	Anti-static and fire resistant protective clothing. DIN EN 11612; EN 533; EN 1149-1. Anti-static safety shoes.
	:	Dust impervious protective suit Choose body protection according to the amount and concentration of the dangerous substance at the work place.
Respiratory protection	:	Use suitable breathing protection if workplace concentration requires. Breathing apparatus with filter. P1 filter

Environmental exposure controls

General advice	:	The product should not be allowed to enter drains, water courses or the soil.
	:	Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	:	powder
Color	:	silver
Odor	:	characteristic
pH	:	substance/mixture is non-soluble (in water)
Melting point/ range	:	> 600 °C
Boiling point/boiling range	:	No data available
Flash point	:	Not applicable
Bulk density	:	No data available
Flammability (solid, gas)	:	The substance or mixture is a flammable solid with the category 1.
Smoldering temperature	:	> 230 °C
Auto-flammability	:	No data available
Upper explosion limit	:	No data available
Lower explosion limit	:	30 g/m3
Vapor pressure	:	No data available
Density	:	2,5 g/cm3 (ca.)
Solubility(ies)		
Water solubility	:	insoluble
Miscibility with water	:	immiscible
Solubility in other solvents	:	No data available

Partition coefficient: n-octanol/water	:	No data available
Ignition temperature	:	340 °C
Thermal decomposition	:	No data available
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	No data available
Flow time	:	No data available

9.2 Other information

No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

No decomposition if stored and applied as directed.

10.2 Chemical stability

No decomposition if stored and applied as directed.

10.3 Possibility of hazardous reactions

Hazardous reactions : Contact with acids and alkalis may release hydrogen.

No decomposition if stored and applied as directed.

Dust may form explosive mixture in air.

10.4 Conditions to avoid

Conditions to avoid : Heat, flames and sparks.

10.5 Incompatible materials

Materials to avoid : Acids
Bases
Oxidizing agents
Water

10.6 Hazardous decomposition products

Other information : No data available

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

No data available

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitization

No data available

Carcinogenicity

No data available

Toxicity to reproduction/fertility

No data available

Reprod.Tox./Development/Teratogenicity

No data available

STOT-single exposure

No data available

STOT-repeated exposure

No data available

Aspiration toxicity

No data available

Further information

Product

No data available

SECTION 12: Ecological information

12.1 Toxicity

No data available

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

No data available

12.6 Other adverse effects

Product:

Additional ecological information	:	No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product	:	Do not dispose of waste into sewer. Do not contaminate ponds, waterways or ditches with chemical or used container. Send to a licensed waste management company.
Contaminated packaging	:	Empty remaining contents. Dispose of as unused product. Do not re-use empty containers. Do not burn, or use a cutting torch on, the empty drum.

SECTION 14: Transport information

14.1 UN number

ADR	:	1309
TDG	:	1309
CFR	:	1309
IMDG	:	1309
IATA	:	1309

14.2 Proper shipping name

ADR	:	ALUMINIUM POWDER, COATED
TDG	:	ALUMINUM POWDER, COATED
CFR	:	ALUMINUM POWDER, COATED
IMDG	:	ALUMINIUM POWDER, COATED
IATA	:	ALUMINIUM POWDER, COATED

14.3 Transport hazard class

ADR	:	4.1
TDG	:	4.1
CFR	:	4.1
IMDG	:	4.1
IATA	:	4.1

14.4 Packing group

ADR

Packaging group	:	II
Classification Code	:	F3
Hazard Identification Number	:	40
Labels	:	4.1
Tunnel restriction code	:	(E)

TDG

Packaging group	:	II
Labels	:	4.1

CFR

Packaging group	:	II
Labels	:	4.1

IMDG

Packaging group	:	II
Labels	:	4.1
EmS Code	:	F-G, S-G

IATA

Packing instruction (cargo aircraft)	:	448
Packing instruction (passenger aircraft)	:	445
Packing instruction (LQ)	:	Y441
Packaging group	:	II
Labels	:	4.1

14.5 Environmental hazards

14.6 Special precautions for user

IMDG Code- segregation group:

: IMDG Code segregation group 15 - Powdered metals

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

No data available

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

REACH - Candidate List of Substances of Very High Concern for Authorization (Article 59).	:	Not applicable
REACH - List of substances subject to authorisation (Annex XIV)	:	Not applicable
Regulation (EU) No 2024/590 on substances that	:	Not applicable

deplete the ozone layer		
Regulation (EU) 2019/1021 on persistent organic pollutants (recast)	:	Not applicable
REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII)	:	
REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII)	:	Banned and/or restricted (aluminium powder (stabilised))
Regulation (EU) 2019/1148 on the marketing and use of explosives precursors	:	Listed (aluminium powder (stabilised))

15.2 Chemical Safety Assessment

No data available

SECTION 16: Other information

Full text of H-Statements

H228 : Flammable solid.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.